

Storm Data and Unusual Weather Phenomena - December 2008

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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WISCONSIN, Southeast

(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE

12/01/08 00:00 CST	0	Winter Storm
12/01/08 04:00 CST	0	

The first winter storm of the 2008-09 winter season over south-central and southeast Wisconsin started during the afternoon hours of November 30th, but continued to 0400 CST in the pre-dawn hours of December 1st. Snow accumulations of 3 to 10 inches were accompanied by northeast winds gusting to 25 to 30 mph, which led to some blowing and drifting of the snow in open and exposed areas. Visibilities at the height of the storm were reduced to 3/8 to 5/8 mile. The greatest accumulations of 6 to 10 inches occurred in a 20-mile wide band extending from Clinton in southeast Rock County northeast to Delafield (Waukesha Co.) to West Bend (Washington Co.) to extreme north-central Sheboygan County. The northern extent of this band actually ended in central Manitowoc County. Maximum accumulations included 10" at Ada (5NW Howards Grove) and Random Lake in Sheboygan County; an estimated 9" to 10" in extreme northwest Ozaukee County; 9.4" at the NWS Forecast Office southeast of Sullivan (Jefferson Co.); 9.3" at Germantown (Washington Co.), 9.1" at West Bend (Washington Co.); 8" at 3SE Palmyra (Jefferson Co.), 7" at Delavan (Walworth Co.) and Eagle (Waukesha Co.); an estimated 6" to 7" in extreme northwest Milwaukee County and southeast Rock County; almost 6" in the extreme southeast corners of Fond du Lac County and Dodge County; 5" to 6" in extreme northwest Racine County; 4" in extreme northwest Kenosha County; 3.7" at Brodhead (Green Co.); and 3" in south-central Dane County. Numerous vehicle accidents were reported in all counties due to icy, slippery, and snow covered roads. Several delayed or cancelled airline flights at Milwaukee Mitchell Field were reported, where 3.3" were measured. The morning commute was slowed down based on Department of Transportation reports. Between 0600 CST and 0900 CST on December 1st, about 19,000 utility customers lost electrical power in parts of Milwaukee, Washington, Ozaukee, and Racine Counties due to tree branches impacting ice-covered power-lines. An indirect fatality was reported in Milwaukee County on December 1st when a 64-year-old man died while snow-blowing (he may have had a heart attack). In Sheboygan County on December 1st, vehicle accidents resulted in 5 people being indirectly injured, and in Green County 2 indirect injuries were reported. The indirect fatality and injuries were entered into the December, 2008, StormData issuance since they occurred in December. Synoptically, low pressure moved northeast through Missouri to Illinois to southern Michigan. Based on WSR-88D Doppler radar, some lake-enhancement (Lake Michigan) aided in snow accumulations thanks to northeast winds.

(WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

12/01/08 00:00 CST	0	Winter Storm
12/01/08 04:00 CST	0	

The first winter storm of the 2008-09 winter season over south-central and southeast Wisconsin started during the afternoon hours of November 30th, but continued to 0400 CST in the pre-dawn hours of December 1st. Snow accumulations of 3 to 10 inches were accompanied by northeast winds gusting to 25 to 30 mph, which led to some blowing and drifting of the snow in open and exposed areas. Visibilities at the height of the storm were reduced to 3/8 to 5/8 mile. The greatest accumulations of 6 to 10 inches occurred in a 20-mile wide band extending from Clinton in southeast Rock County northeast to Delafield (Waukesha Co.) to West Bend (Washington Co.) to extreme north-central Sheboygan County. The northern extent of this band actually ended in central Manitowoc County. Maximum accumulations included 10" at Ada (5NW Howards Grove) and Random Lake in Sheboygan County; an estimated 9" to 10" in extreme northwest Ozaukee County; 9.4" at the NWS Forecast Office southeast of Sullivan (Jefferson Co.); 9.3" at Germantown (Washington Co.), 9.1" at West Bend (Washington Co.); 8" at 3SE Palmyra (Jefferson Co.), 7" at Delavan (Walworth Co.) and Eagle (Waukesha Co.); an estimated 6" to 7" in extreme northwest Milwaukee County and southeast Rock County; almost 6" in the extreme southeast corners of Fond du Lac County and Dodge County; 5" to 6" in extreme northwest Racine County; 4" in extreme northwest Kenosha County; 3.7" at Brodhead (Green Co.); and 3" in south-central Dane County. Numerous vehicle accidents were reported in all counties due to icy, slippery, and snow covered roads. Several delayed or cancelled airline flights at Milwaukee Mitchell Field were reported, where 3.3" were measured. The morning commute was slowed down based on Department of Transportation reports. Between 0600 CST and 0900 CST on December 1st, about 19,000 utility customers lost electrical power in parts of Milwaukee, Washington, Ozaukee, and Racine Counties due to tree branches impacting ice-covered power-lines. An indirect fatality was reported in Milwaukee County on December 1st when a 64-year-old man died while snow-blowing (he may have had a heart attack). In Sheboygan County on December 1st, vehicle accidents resulted in 5 people being indirectly injured, and in Green County 2 indirect injuries were reported. The indirect fatality and injuries were entered into the December, 2008, StormData issuance since they occurred in December. Synoptically, low pressure moved northeast through Missouri to Illinois to southern Michigan. Based on WSR-88D Doppler radar, some lake-enhancement (Lake Michigan) aided in snow accumulations thanks to northeast winds.

(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

12/03/08 03:00 CST	0	Winter Weather
12/03/08 20:00 CST	0	

A typical light to moderate snow event affected parts of south-central and southeast Wisconsin and deposited 3 to almost 5 inches of

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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snow. The greatest accumulations occurred from the Monroe/Janesville area northeast through Waukesha to Sheboygan and Port Washington. Specific snow measurements include 4.2 inches at Brodhead (Green Co.), 4 inches in Jefferson (Jefferson Co.) and at Beloit College (Rock Co.), 4.8 inches near Oconomowoc (Waukesha Co.), 3.5 inches in West Bend (Washington Co.), and 3.1 inches in Sheboygan (Sheboygan Co.). Dozens of vehicle accidents were reported by the media. Snow amounts tapered off to 2 to 3 inches in the counties of Fond du Lac, Dodge, Dane, Lafayette, Racine, and Kenosha. Synoptically, a surface trough moved across southern Wisconsin in conjunction with a weather disturbance in the upper levels of the atmosphere. Gusty northwest winds of 15 to 25 mph behind the surface trough generated some minor blowing and drifting of the new snow.

(WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH

12/08/08 17:00 CST	0	Winter Storm
12/09/08 19:00 CST	0	

The 2nd major winter storm in the 2008-09 winter season affected most of south-central and southeast Wisconsin with heavy snows, sleet, freezing rain, and blowing snow. The area of greatest snow accumulations extended from Sauk County east-northeast through Fond du Lac and Sheboygan Counties where 8 to 12 inches were measured. Snow amounts tapered off to 2 to 4 inches near the Illinois border where there was more freezing rain. Ice accumulations were on the order of 1/10 to 2/10 of an inch near the Illinois border. Freezing rain and sleet amounts were minimal north of a Madison to Milwaukee line. Specific snow amounts include 12 inches in Pardeeville (Columbia Co.); 11.2 inches in Sheboygan (Sheboygan Co.); 11 inches in Wisconsin Dells (Columbia Co.) and Baraboo (Sauk Co.); 10.5 inches in Alleton (Washington Co.); around 10 inches in Marquette County; 9.5 inches in Fond du Lac (Fond du Lac Co.) and Berlin (Green Lake Co.); 9 inches in Beaver Dam (Dodge Co.) and northwest Ozaukee County; 7.5 inches in Lake Mills (Jefferson Co.); 7.1 inches in Middleton (Dane Co.); an estimated 7 inches in extreme northern Waukesha County; and an estimated 6 inches in northwestern Milwaukee County, southeastern Iowa County, northeastern Lafayette County, northern Green County, and northwestern Rock County.

An accident involving a semi tractor-trailer on Interstate 39/90 near Beloit (Rock Co.) backed up traffic for about 3 miles in the eastbound (south) lanes for about 45 minutes. An alternative route was established by the State Patrol. Another accident involving a semi tractor-trailer blocked traffic on STH 41 and CTH N about 8 miles northwest of the city of Fond du Lac. Traffic was detoured for about an hour. Otherwise dozens of vehicle runoffs or accidents were reported by the media, and commute times increased. Numerous schools and civic functions were canceled due to the storm. Several airplane flights were delayed or cancelled at the major airports in Madison and Milwaukee. Synoptically, a strong low pressure developed over the Oklahoma panhandle and moved to northern Arkansas to Indiana and then to Lake Erie.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON

12/08/08 18:00 CST	0	Winter Storm
12/09/08 15:00 CST	0	

The 2nd major winter storm in the 2008-09 winter season affected most of south-central and southeast Wisconsin with heavy snows, sleet, freezing rain, and blowing snow. The area of greatest snow accumulations extended from Sauk County east-northeast through Fond du Lac and Sheboygan Counties where 8 to 12 inches were measured. Snow amounts tapered off to 2 to 4 inches near the Illinois border where there was more freezing rain. Ice accumulations were on the order of 1/10 to 2/10 of an inch near the Illinois border. Freezing rain and sleet amounts were minimal north of a Madison to Milwaukee line. A spotter 5 miles southwest of the Madison State Capital noted that the snow started as if someone turned on a facet! Specific snow amounts include 12 inches in Pardeeville (Columbia Co.); 11.2 inches in Sheboygan (Sheboygan Co.); 11 inches in Wisconsin Dells (Columbia Co.) and Baraboo (Sauk Co.); 10.5 inches in Alleton (Washington Co.); around 10 inches in Marquette County; 9.5 inches in Fond du Lac (Fond du Lac Co.) and Berlin (Green Lake Co.); 9 inches in Beaver Dam (Dodge Co.) and northwest Ozaukee County; 7.5 inches in Lake Mills (Jefferson Co.); 7.1 inches in Middleton (Dane Co.); an estimated 7 inches in extreme northern Waukesha County; and an estimated 6 inches in northwestern Milwaukee County, southeastern Iowa County, northeastern Lafayette County, northern Green County, and northwestern Rock County.

An accident involving a semi tractor-trailer on Interstate 39/90 near Beloit (Rock Co.) backed up traffic for about 3 miles in the eastbound (south) lanes for about 45 minutes. An alternative route was established by the State Patrol. Another accident involving a semi tractor-trailer blocked traffic on STH 41 and CTH N about 8 miles northwest of the city of Fond du Lac. Traffic was detoured for about an hour. Otherwise dozens of vehicle runoffs or accidents were reported by the media, and commute times increased. Numerous schools and civic functions were canceled due to the storm. Several airplane flights were delayed or cancelled at the major airports in Madison and Milwaukee. Synoptically, a strong low pressure developed over the Oklahoma panhandle and moved to northern Arkansas to Indiana and then to Lake Erie.

(WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z065) WAUKESHA

12/08/08 19:00 CST	0	Winter Storm
12/09/08 21:00 CST	0	

The 2nd major winter storm in the 2008-09 winter season affected most of south-central and southeast Wisconsin with heavy snows, sleet, freezing rain, and blowing snow. The area of greatest snow accumulations extended from Sauk County east-northeast through Fond du Lac and Sheboygan Counties where 8 to 12 inches were measured. Snow amounts tapered off to 2 to 4 inches near the Illinois

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border where there was more freezing rain. Ice accumulations were on the order of 1/10 to 2/10 of an inch near the Illinois border. Freezing rain and sleet amounts were minimal north of a Madison to Milwaukee line. Specific snow amounts include 12 inches in Pardeeville (Columbia Co.); 11.2 inches in Sheboygan (Sheboygan Co.); 11 inches in Wisconsin Dells (Columbia Co.) and Baraboo (Sauk Co.); 10.5 inches in Alleton (Washington Co.); around 10 inches in Marquette County; 9.5 inches in Fond du Lac (Fond du Lac Co.) and Berlin (Green Lake Co.); 9 inches in Beaver Dam (Dodge Co.) and northwest Ozaukee County; 7.5 inches in Lake Mills (Jefferson Co.); 7.1 inches in Middleton (Dane Co.); an estimated 7 inches in extreme northern Waukesha County; and an estimated 6 inches in northwestern Milwaukee County, southeastern Iowa County, northeastern Lafayette County, northern Green County, and northwestern Rock County.

An accident involving a semi tractor-trailer on Interstate 39/90 near Beloit (Rock Co.) backed up traffic for about 3 miles in the eastbound (south) lanes for about 45 minutes. An alternative route was established by the State Patrol. Another accident involving a semi tractor-trailer blocked traffic on STH 41 and CTH N about 8 miles northwest of the city of Fond du Lac. Traffic was detoured for about an hour. Otherwise dozens of vehicle runoffs or accidents were reported by the media, and commute times increased. Numerous schools and civic functions were canceled due to the storm. Several airplane flights were delayed or cancelled at the major airports in Madison and Milwaukee. Synoptically, a strong low pressure developed over the Oklahoma panhandle and moved to northern Arkansas to Indiana and then to Lake Erie.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCREE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/15/08 03:00 CST	0	Cold/Wind Chill
	12/15/08 12:00 CST	0	

Post cold-frontal wind chill values dropped to -20 to -30 across south-central and southeast Wisconsin. These bitter-cold wind chills were generated by west winds at 17 to 26 knots (20 to 30 mph) with gusts to 26 to 36 knots (30 to 41 mph). Actual air temperatures were in the single digits above zero, or fell into that temperature range during this event.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCREE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/16/08 12:00 CST	0	Winter Weather
	12/17/08 03:00 CST	0	

Yet another round of light to moderate snow affected south-central and southeast Wisconsin on December 16th and 17th. Accumulations of at least 3 inches occurred in all areas. Up to 4 to 5.5 inches fell in a band from Lafayette County northeast through Dane County to Washington County. The highest total of 5.5 inches was measured near Sun Prairie (Dane Co.). Dozens of vehicle accidents were reported by the media, and several airline flights were delayed at the major airports in Madison and Milwaukee. Synoptically, warm and moist air road up and over colder air at the surface over southern Wisconsin in conjunction with an upper-level disturbance in the atmosphere.

(WI-Z056) SAUK, (WI-Z062) IOWA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/18/08 21:00 CST	0	Winter Storm
	12/19/08 12:00 CST	0	

This was the 3rd major winter storm of the 2008-09 winter season for south-central and southeast Wisconsin. It dumped 8 to around 14 inches, but the impact on society was significant since there was a lot of blowing and drifting of the snow. Bands of heavy convective snow had snowfall rates of 2 to 3 inches per hour. The winds were generally east becoming northeast and then north at 13 to 22 knots (15 to 25 mph) with gusts to 26 knots (30 mph). However, along the Lake Michigan shoreline, a few winds gusts peaked at 30 to 35 knots (35 to 40 mph), which resulted in near-blizzard conditions in that area. Snow drifts were reported to be 2 to 4 feet in height across southern Wisconsin. In the middle of the night a small plane skidded off a runway at Milwaukee Mitchell Field, but there were no injuries. Mitchell Field was closed for a couple hours due to the incident. Additionally, many airplane flights were delayed or cancelled at the airports in Madison and Milwaukee. Numerous schools and civic functions were cancelled. Media reports indicated that dozens of vehicle accidents occurred. A 2-car accident in the Town of Bristol in Dane County claimed the life of a 16-year old girl (indirect death) on December 18th.

Specific snowfall measurements include 14.3 inches in West Allis (Milwaukee Co.); 13.3 inches in Brookfield (Waukesha Co.); 13 inches in Argyle (Lafayette Co.); 12.5 inches near Richland (Washington Co.); 12 inches near Sheboygan (Sheboygan Co.) and far northwestern Ozaukee County; Union Grove (Racine Co.); 12.3 inches in Paddock Lake (Kenosha Co.); 11.5 inches in Middleton (Dane Co.); 11.2 inches in Jefferson (Jefferson Co.); 11 to 12 inches in far northwestern Iowa County and far west-central Green County; 11 inches in far south-central Columbia County and in Beaver Dam (Dodge Co.); 10.9 inches in East Troy (Walworth Co.); 10.8 inches in Afton (Rock Co.); 10.2 inches in Reedsburg (Sauk Co.); 10 inches near Campbellsport (Fond du Lac Co.); 8.6 inches in Markesan (Green Lake Co.), and 8 to 8.5 inches in southern Marquette County. Synoptically, a strong low pressure moved from southeast Colorado to eastern Kansas to northeast Missouri to Indiana. Surface dewpoints were in the 55 to 60 range on the southeast side of the low pressure.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA				
	12/18/08 22:00 CST		0	Winter Storm
	12/19/08 12:00 CST		0	

This was the 3rd major winter storm of the 2008-09 winter season for south-central and southeast Wisconsin. It dumped 8 to around 14 inches, but the impact on society was significant since there was a lot of blowing and drifting of the snow. Bands of heavy convective snow had snowfall rates of 2 to 3 inches per hour. The winds were generally east becoming northeast and then north at 13 to 22 knots (15 to 25 mph) with gusts to 26 knots (30 mph). However, along the Lake Michigan shoreline, a few winds gusts peaked at 30 to 35 knots (35 to 40 mph), which resulted in near-blizzard conditions in that area. Snow drifts were reported to be 2 to 4 feet in height across southern Wisconsin. In the middle of the night a small plane skidded off a runway at Milwaukee Mitchell Field, but there were no injuries. Mitchell Field was closed for a couple hours due to the incident. Additionally, many airplane flights were delayed or cancelled at the airports in Madison and Milwaukee. Numerous schools and civic functions were cancelled. Media reports indicated that dozens of vehicle accidents occurred. A 2-car accident in the Town of Bristol in Dane County claimed the life of a 16-year old girl (indirect death) on December 18th.

Specific snowfall measurements include 14.3 inches in West Allis (Milwaukee Co.); 13.3 inches in Brookfield (Waukesha Co.); 13 inches in Argyle (Lafayette Co.); 12.5 inches near Richland (Washington Co.); 12 inches near Sheboygan (Sheboygan Co.) and far northwestern Ozaukee County; Union Grove (Racine Co.); 12.3 inches in Paddock Lake (Kenosha Co.); 11.5 inches in Middleton (Dane Co.); 11.2 inches in Jefferson (Jefferson Co.); 11 to 12 inches in far northwestern Iowa County and far west-central Green County; 11 inches in far south-central Columbia County and in Beaver Dam (Dodge Co.); 10.9 inches in East Troy (Walworth Co.); 10.8 inches in Afton (Rock Co.); 10.2 inches in Reedsburg (Sauk Co.); 10 inches near Campbellsport (Fond du Lac Co.); 8.6 inches in Markesan (Green Lake Co.), and 8 to 8.5 inches in southern Marquette County. Synoptically, a strong low pressure moved from southeast Colorado to eastern Kansas to northeast Missouri to Indiana. Surface dewpoints were in the 55 to 60 range on the southeast side of the low pressure.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK				
	12/20/08 21:00 CST		0	Winter Storm
	12/21/08 18:00 CST		0	

The 4th major winter storm of the 2008-09 winter season affected all of south-central and southeast Wisconsin. While this storm featured only 2 to 5 inches of new, dry snow, the snow was combined with strong west winds occasionally gusting to 30 to 38 knots (35 to 44 mph). Consequently, there was considerable blowing and drifting of the new snow as visibilities dropped to around 1/4 to 1/2 mile at times. Snow amounts ranged from around 2 inches near the Illinois border to 4 to 5 inches over portions of Marquette County over to Sheboygan County. Elkhart Lake (Sheboygan Co.) had the greatest amount with 5 inches. Locally, a brief near white-out condition developed on Interstate-43 in the Town of Belgium about 1145CST to 1150CST on December 21st which resulted in a 15-vehicle accident. There were 11 injuries but no fatalities. The southbound lane was closed for about 3 hours. Several airline flights were delayed or cancelled at the major airports in Madison and Milwaukee. Media reports indicated that hundreds of vehicle accidents or run-offs occurred. Synoptically, the snow was generated by a low pressure dropping southeast from the Northern Plains across Wisconsin followed by a strong arctic cold front that ushered in bitter cold air and strong west winds.

The snow that fell in this winter storm, in conjunction with other storms and numerous other snow systems during the month of December, 2008, ultimately led to above normal precipitation and snowfall for the month. Precipitation totals ranged from 3.1 inches in parts of Sauk and Fond du Lac County to 6.1 inches in parts of Ozaukee County. Normal precipitation is 1.6 to 2.3 inches. Monthly snowfall totals ranged from 29 inches in parts of Dane County to 58 inches in parts of Sheboygan County. Normal December snowfall is in the 12-15 inch range, and normal winter season snowfalls are in the 30 to 54 inches range. Madison recorded 40.4 inches for December, 2008, a new December record and a new record for any month. Milwaukee measured 35.3 inches, which was the 2nd snowiest December on record.

(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	12/21/08 00:00 CST		0	Winter Storm
	12/21/08 18:00 CST		0	

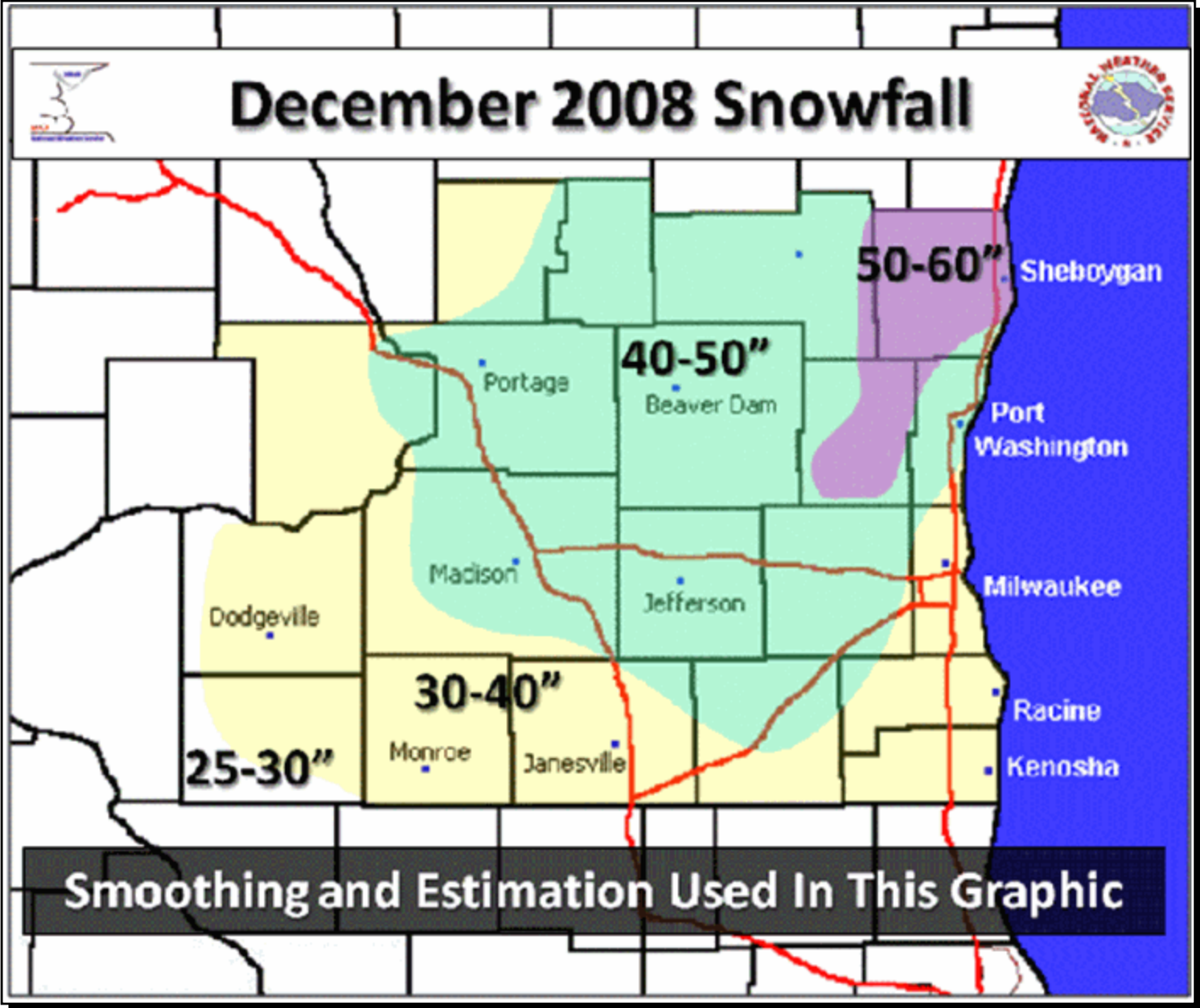
The 4th major winter storm of the 2008-09 winter season affected all of south-central and southeast Wisconsin. While this storm featured only 2 to 5 inches of new, dry snow, the snow was combined with strong west winds occasionally gusting to 30 to 38 knots (35 to 44 mph). Consequently, there was considerable blowing and drifting of the new snow as visibilities dropped to around 1/4 to 1/2 mile at times. Snow amounts ranged from around 2 inches near the Illinois border to 4 to 5 inches over portions of Marquette County over to Sheboygan County. Elkhart Lake (Sheboygan Co.) had the greatest amount with 5 inches. Locally, a brief near white-out condition developed on Interstate-43 in the Town of Belgium about 1145CST to 1150CST on December 21st which resulted in a 15-vehicle accident. There were 11 injuries but no fatalities. The southbound lane was closed for about 3 hours. Several airline flights were delayed or cancelled at the major airports in Madison and Milwaukee. Media reports indicated that hundreds of vehicle accidents or run-offs occurred. A Milwaukee man died while shoveling snow (indirect death). Also, a Milton (Rock Co.) woman died in a 2-vehicle accident on slippery roads. Synoptically, the snow was generated by a low pressure dropping southeast from the Northern Plains across

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Wisconsin followed by a strong arctic cold front that ushered in bitter cold air and strong west winds.

The snow that fell in this winter storm, in conjunction with other storms and numerous other snow systems during the month of December, 2008, ultimately led to above normal precipitation and snowfall for the month. Precipitation totals ranged from 3.1 inches in parts of Sauk and Fond du Lac County to 6.1 inches in parts of Ozaukee County. Normal precipitation is 1.6 to 2.3 inches. Monthly snowfall totals ranged from 29 inches in parts of Dane County to 58 inches in parts of Sheboygan County. Normal December snowfall is in the 12-15 inch range, and normal winter season snowfalls are in the 30 to 54 inches range. Madison recorded 40.4 inches for December, 2008, a new December record and a new record for any month. Milwaukee measured 35.3 inches, which was the 2nd snowiest December on record.



Snowfall graphic for the Milwaukee/Sullivan County Warning Area for December, 2008. Generated by Alex Lamers, SCEP.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/21/08 02:00 CST	2	0	Cold/Wind Chill
	12/22/08 12:00 CST		0	

Yet another bitter cold air mass pushed across southern Wisconsin in the wake of a winter storm. West winds of 13 to 17 knots (15 to 20 mph) with gusts to 26 to 35 knots (30 to 40 mph) generated wind chills of -20 to -34. Actual air temperatures at the start of this event

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ranged from -7 at Mineral Point (Iowa Co.) to 21 at Sheboygan, but eventually dropped to a range from -5 at the Lone Rock Airport (Sauk Co.) to a +5 at Timmerman Field in Milwaukee County. A newspaper carrier about 3 miles east of Monticello (Green Co.) died due to exposure after his vehicle got stuck in a snow drift. In Sheboygan County, a man in the Town of Holland died within 1/2 mile of his home due to exposure after his vehicle was involved in an accident. Although not related to the bitter cold wind chills, a vehicle roll-over in southern Sauk County during the overnight hours resulted in 6 people suffering indirectly-related injuries (vehicle moving too fast for slippery conditions). In the city of Milwaukee, the driver of a vehicle lost control on an icy patch on Interstate-43 and went over a guard rail and dropped 15 feet onto an onramp below. The driver suffered serious injuries.

Direct Fatalities: M54OU, M59OU

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/23/08 03:00 CST	0	Winter Weather
	12/23/08 21:00 CST	0	

Another low pressure moved from the Mid-Mississippi River Valley to northern Lower Michigan and deposited 2 to 5.6 inches of snow across south-central and southeast Wisconsin. Some blowing and drifting snow was reported in open and exposed areas as south to southwest winds occasionally gusted to 30 knots (35 mph). Generally more than 3 inches fell east from Fond du Lac County to Dane County to Rock County, and more than 4 inches accumulated over the counties of Sheboygan, Washington, Ozaukee, northeastern Waukesha, and northwestern Milwaukee. A maximum of 5.6 inches was measured near Jackson in Washington County. Media reports indicated that dozens of vehicle accidents occurred.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/24/08 06:00 CST	50K	Winter Weather
	12/24/08 21:00 CST	0	

Yet another low pressure system moving from the Southern Plains to Lower Michigan dumped light to moderate snow amounts across south-central and southeast Wisconsin. Snow accumulations were generally 3 to 4 inches, but amounts tapered off to 2 inches near Lake Michigan from Milwaukee south to Kenosha. Northwest winds on the backside of the low pressure gusted on occasions to 30 knots (35 mph), resulting in blowing and drifting of the snow in open and exposed areas. Visibilities were reduced to around 1/2 mile at times. Snow and ice accumulations caused a 100-foot by 200-foot section of a roof to collapse on a building in Kohler (Sheboygan Co.), but there were no injuries. Dozens of vehicle accidents were reported by the media. A 2-vehicle accident near Cottage Grove (Dane Co.) claimed the life of an 18-year-old man. In the Town of Clyman (Dodge Co.), a 2-vehicle accident resulted in the deaths of a mother and her young boy, and 1 injury. Near Wisconsin Dells (Columbia Co.) a 60-year old woman died in a roll-over, with 3 other people injured. A 4-vehicle accident near Gratiot (Lafayette Co.) resulted in 4 injuries. All of the fatalities and injuries in these vehicle incidents were "indirectly-related" to slippery road conditions.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/25/08 19:00 CST	0	Winter Weather
	12/26/08 06:00 CST	0	

A low pressure over the Northern Plains dropped southeast across Illinois and generated light snow amounts of 0.5 to 2.5 inches over south-central and southeast Wisconsin. However, freezing rain and sleet accumulations of 1/10 to 2/10 of an inch occurred before colder air changed the precipitation to snow. Road surfaces became slippery and dozens of vehicle accidents were reported by the media. The greatest accumulations of 2 to 2.5 inches occurred from Marquette County east to Fond du Lac County. Amounts tapered off to less than a half inch near the Illinois border.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	12/26/08 10:00 CST	0	Dense Fog
	12/27/08 18:00 CST	0	

The combination of south winds, above normal temperatures, and snow melt resulted in the formation of a long-duration dense fog event across south-central and southeast Wisconsin. Visibilities were reduced to 1/16 to 1/4 mile while there was occasional light rain, or light snow, or light drizzle. The media noted a few vehicle accidents and some airplane flights were delayed or cancelled at the major airports in Madison and Milwaukee. Overnight low temperatures dropped to only the mid 30s to mid 40s. Milwaukee tied its record daily maximum temperature of 51F on December 26th. Madison's maximum temperature of 49F on December 27th was one degree short of their record daily high. On the 27th, maximum temperatures across south-central and southeast Wisconsin ranged from 42 at

Storm Data and Unusual Weather Phenomena - December 2008

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Juneau (Dodge Co.) to 58 in Kenosha (Kenosha Co.). Normals for this time of the year are 25 to 30 for maximum temperatures and 10 to 18 for minimum temperatures. The precipitation and snowmelt that occurred during this dense fog event ultimately resulted in river flooding along the major rivers in southeast Wisconsin from December 27th through the end of the month or even into early January, 2009. Water levels exceeded flood stage by 2.56 feet at New Munster on the Fox River in western Kenosha County. In Racine County, the Root River Canal near Raymond exceeded flood stage by 1.53 feet. Some bottomland roads were closed, but no damage was reported to residential homes or businesses.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH	12/27/08 18:00 CST	0	Winter Weather
	12/28/08 08:00 CST	0	

This was the last in a long series of storms and snowfalls to affect south-central and southeast Wisconsin during December, 2008. Warm air advection in the mid-levels of the atmosphere followed by a strong cold front, resulted in a mixed bag of precipitation types. The precipitation started off as freezing rain that left a glazing of ice up to 1/8 inch thick. After the cold air arrived, snowfalls of 1 to around 3 inches occurred, along with blowing and drifting of the snow. Northwest winds gusted up to 26 to 35 knots. The media noted that dozens of vehicle accidents occurred. Specific snow measurements include 3.2 inches at Mt. Horeb and 1.9 inches at Madison (Dane Co.); 3.1 inches near Oxford (Marquette Co.); 3 inches in Portage (Columbia Co.) and Berlin (Green Lake Co.); and 1.5 inches in Waukesha (Waukesha Co.). Snow amounts tapered off toward the southeast. Measured wind gust reports of 40 to 43 knots (46 to 50 mph) came out of the Kenosha (Kenosha Co.) area.